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09/482,843	01/13/2000	Marcus Peinado	MSFT-0103/127334.6	7584
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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION)			SMITH, JEFFREY A	
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PHILADELPHIA, PA 19103			ART UNIT	PAPER NUMBER
			3625	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/482,843	Applicant(s) PEINADO ET AL.	
	Examiner Jeffrey A. Smith	Art Unit 3625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 121, 124 and 126-135 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 121, 124 and 126-135 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 January 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Request for Withdrawal of Finality of Office Action

The "Request for Withdrawal of Finality of Office Action" filed February 2, 2005 and requesting the withdrawal of finality of the Office action mailed November 16, 2004 is persuasive. The finality of such Office action is herein withdrawn and prosecution has been re-opened.

Response to Amendment filed February 27, 2004

The response filed February 27, 2004 has been entered. By such response, the status of the claims is as follows:

claims 1-120, 122, 123, and 125 are cancelled; and
claims 121, and 124, and 126-135 are pending.

An action on the merits of claims 121, 124, and 126-135 follows.

Oath/Declaration

The oath or declaration filed May 2, 2000 is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

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Non-initialed and/or non-dated alterations have been made to the oath or declaration. See 37 CFR 1.52(c).

It was not executed in accordance with either 37 CFR 1.66 or 1.68.

Specifically, the declaration contains a non-initialed alteration to the filing date of the provisional application 60/126,614. Additionally, the declaration has not been signed by any of the inventors.

Drawings

The drawings filed January 13, 2000 are objected to because the figures do not observe required margins.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional

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replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

The Preliminary Amendment filed January 13, 2000 contains an amendment to the specification which identifies the filing date of provisional application 60/126,614 as "March 27, 1998". The correct filing date of such provisional application, however, is: --March 27, 1999--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

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The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 121, 124, and 126-135 are rejected under 35 U.S.C.

112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The claims are not enabled for any specific physical or logical relationship among data elements, and as such are not enabled, particularly, in a manner characteristic of a "data structure". The Examiner notes that the specification provides no specific definition of the phrase "data structure". The Examiner has, therefore, relied upon the definition of "data structure" cited in In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994). Such definition states that a "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." (The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993)). The specification, in this case, does not enable any such physical or logical relationship of data elements designed to support specific data

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manipulation functions in a manner which rises to meet this definition of a "data structure" (see also related discussion under 35 USC 101, below).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 121, 124, and 126-135 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The preambles of claims 121, 124, and 126-135 recite a "data structure", however, the bodies of these claims fail to define any physical or logical relationship between data elements which serves to distinguish such data elements as constituents of a data structure, per se (see related discussion under 35 USC 112, first paragraph above and related discussions under 35 USC 101 below). Therefore, the scope of the claims is unclear, since the bodies of the claims are not commensurate in scope to the preambles.

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In claims 124, and 126-135: the preambles of all dependent claims should be consistent with that of claim 121. The preambles of the dependent claims should not be limited to simply "[t]he data structure of claim...".

In claims 129, 130, and 133: the numbering of the data fields should progress numerically from the "first" through "fourth" data fields already set forth in claim 121. Each of the "fourth" data fields recited in claims 129, 130, and 133 have been considered as --fifth-- data fields, while the "fifth" data field recited in claim 133 has been considered as a --sixth-- data field for examination purposes.

Applicant must make all appropriate corrections.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 121, 124, and 126-135 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claimed Subject Matter

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Claims 121, 124, and 126-135 recite, in combination, "a computer-readable medium having stored thereon a "data structure". The bodies of claims 121, 129, 130, and 133 proceed to define the "data structure" by setting forth a plurality of data fields containing respective data (i.e., encrypted digital content, a content or package ID, license acquisition information, a content provider public key, a key ID, a certificate, a first certificate, and a second certificate).

Fundamentally, claims 121, 129, 130, and 133 may be diagrammed as follows:

Claim 121:

Computer-readable Medium		
First Data Field	<=	[encrypted digital content]
Second Data Field	<=	[content or package ID]
Third Data Field	<=	[license acquisition information]
Fourth Data Field	<=	[content provider public key]

Claim 129:

Computer-readable Medium		
First Data Field	<=	[encrypted digital content]
Second Data Field	<=	[content or package ID]
Third Data Field	<=	[license acquisition information]
Fourth Data Field	<=	[content provider public key]
Fifth Data Field	<=	[key ID]

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Claim 130:

Computer-readable Medium		
First Data Field	<=	[encrypted digital content]
Second Data Field	<=	[content or package ID]
Third Data Field	<=	[license acquisition information]
Fourth Data Field	<=	[content provider public key]
Fifth Data Field	<=	[certificate]

Claim 133:

Computer-readable Medium		
First Data Field	<=	[encrypted digital content]
Second Data Field	<=	[content or package ID]
Third Data Field	<=	[license acquisition information]
Fourth Data Field	<=	[content provider public key]
Fifth Data Field	<=	[first certificate]
Sixth Data Field	<=	[second certificate]

Authority

A review of MPEP 2106(IV)(B)(1) reveals:

Claims to computer-related inventions that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Abstract ideas, *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere manipulation of abstract ideas, *Schrader*, 22 F.3d at 292-93, 30 USPQ2d at 1457-58, are not patentable. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and

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Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). When nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. Such a result would exalt form over substance. In re Sarkar, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) ("[E]ach invention must be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under 101, the claimed invention, as a whole, must be evaluated for what it is.") (quoted with approval in Abele, 684 F.2d at 907, 214 USPQ at 687). See also In re Johnson, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) ("form of the claim is often an exercise in drafting"). Thus, nonstatutory music is not a computer component and it does not become statutory by merely recording it on a compact disk. Protection for this type of work is provided under the copyright law. (Emphasis Added)

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Analysis

Prong 1: Are the claims directed to descriptive material, per se?

It is noted that the claims recite some form of descriptive material in combination with a computer-readable medium.

The descriptive material is recited as a "data structure".

The "data structure" comprises a plurality of various specific data elements contained in respective data fields.

In that the descriptive material is recited in combination with a computer-readable medium, the claims are not directed to the descriptive material, per se.

Prong 2: Does any of the descriptive material constitute functionally descriptive material?

A review of the claims reveals that none of the data elements, when considered alone or together forming the "data structure", permit a function of the data element(s) to be realized through the use of technology. Although the data elements recited may be used in support of the realization of some miscellaneous function, such

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realization is not a realization of a function of the data elements themselves. Accordingly, the data elements recited, when considered alone or together forming the "data structure", do not constitute functionally descriptive material.

Prong 3: If the descriptive material does not constitute functionally descriptive material, does the descriptive material constitute a "data structure"?

Applicant characterizes the various data elements assigned to respective data fields as a "data structure". The Examiner notes that the specification provides no special definition of the phrase "data structure", and the Examiner, therefore, relies upon the definition of the phrase "data structure" cited in In re Warmerdam, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994). Such definition states that a "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." (The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993)).

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Is there a physical relationship among data elements?

A review of the claims does not reveal any physical relationship among the data elements of the recited "data structure" which is designed to support specific data manipulation functions. Although the claims recite the presence of a plurality of data fields which each contain a respective one of the plurality of data elements, the claims fail to establish any relational organization of the data fields and their respective data elements among each other which gives rise to a physical arrangement as a "data structure", per se. The mere presence and numerical labeling of the various data fields and the further assignment of the various data elements to a respective, numerically labeled data field does not amount to a real organization of the data fields and their respective data elements into a physical arrangement. This is because a numerical labeling of a data field, per se, is not indicative of a memory position from among a pool of free memory positions at which a respective data element is stored.

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As an example, a simple array data structure represents an organizational form for a first data element (DE1) and a second data element (DE2). Data elements DE1 and DE2 may be assigned to a first data field (DF1) and a second data field (DF2), respectively. Data fields DF1 and DF2 are located in memory relative to each other at respective memory positions (P1, P1+1) from among a pool of reserved free memory positions (FMP1, FMP2, FMP3, and FMP4). For example, when P1=FMP1, then P1+1=FMP2. This results in the memory positions of the pool of reserved free memory positions to be filled as follows: [DE1, DE2, 0, 0]. Further, when P1=FMP2, then P1+1=FMP3. This results in the memory positions of the pool of reserved free memory positions being filled as follows: [0, DE1, DE2, 0]. Finally, when P1=FMP3, then P1+1=FMP4. This results in the memory positions of the pool of reserved free memory positions being filled as follows: [0, 0, DE1, DE2].

The above example serves to show that the assignment of a particular data element to a numerically labeled data field does not, in and of itself, establish a

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relationship of the particular data elements to each other as stored in memory. Rather, a positional relationship among the data fields must also be established in order to provide a relational organization of the data fields and their respective data elements which gives rise to a physical arrangement of the data elements in forming a "data structure", per se.

Also, from the above example it can be seen that the numerical labels ascribed to the data fields in the instant claims do not, alone, establish the relative positioning of the various data elements in respective memory positions in a pool of reserved free memory positions. It then follows that there is no indication in the claims as to what organizational form the data elements take in relationship to each other upon any subsequent storage in the respective memory positions. Accordingly, there is no indication in the claims as to what physical arrangement the data elements assume in constitution of the recited "data structure".

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Is there a logical relationship among data elements?

A further review of the claims does not reveal any logical relationship among the data elements of the recited "data structure" which is designed to support specific data manipulation functions. The only identifiable relationship among the recited data elements appears to be merely a conceptual one that is born out of a data element's assignment to one of the numerically labeled data fields. This relationship, however, is seemingly arbitrary because each data element's assignment to one of the numerically labeled data fields appears to have arisen solely for the purposes of claim construction, rather than for the purposes of establishing some real logical relationship among the data elements.

For example, there is no apparent reason why any of the various data elements could not be contained in any of the various data fields as opposed to the respective data field to which the various data elements are assigned in the claims. This is because it is not apparent that the assignment of any given

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data element to a respective, numerically labeled data field effects any logical relationship among the data elements which is designed to support specific data manipulation functions. It appears that any assignments of the data elements to respective, numerically labeled data fields different from those assignments recited in the claims would leave any logical relationship already present in the claims unaffected.

Accordingly, although characterized as a "data structure" by Applicant, the claims do not set forth a data structure, as such, as defined in The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993). Rather, the "data structure" recited by Applicant amounts to nothing more than an indexed catalog of a plurality of various specific data elements.

Conclusion

Although claims 121, 129, 130, and 133 recite "a computer-readable medium having stored thereon a data structure", such claims fail to set forth a computer-readable medium in

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combination with either functionally descriptive material or a data structure, per se. Rather, the claims are directed to a computer-readable medium having stored thereon an indexed catalog of a plurality of various specific data elements--the data elements, when considered alone or together, constituting merely non-functionally descriptive material. Accordingly, claims 121, 124 and 126-135 are determined to fall within a judicially created exception to patent eligible subject matter.

Claims 124, 126-128, 131, 132, and 134-136 depend, either directly or indirectly, from claim 121. A review of these dependent claims reveals the recitation of no further fields and no further data elements. The recitations here do not provide either functionally descriptive material or a data structure, per se. Accordingly, these claims fail to further distinguish these dependent claims from claim 121 in a manner that precludes them from the same judicially created exception to patent eligible subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 121, 124, and 126-135 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erickson (U.S. Patent No. 5,765,152).

Erickson discloses a computer-readable medium (col. 2, line 61-col. 3, lines 17) having stored thereon a data structure (i.e. a "document" comprising first through sixth data fields containing respective first through sixth data elements). As shown in Fig. 1A, a first data field contains header data, a second data field contains document ID data, a third data field contains content data, a fourth data field contains source work extensions data, a fifth data field contains minimum permissions data, and a sixth data field contains digital document signature data. Erickson teaches that one of ordinary skill in the art will appreciate that other orderings of the data within the data structure are possible (col. 12, lines 56-58). Particularly regarding the nature of the Document ID, Erickson teaches:

"Document Identifier 22 uniquely identifies the DOCUMENT 20 by the registration server upon which the DOCUMENT has been registered, and the DOCUMENT's registration or index number on that server. This registration code typically contains

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the server name and registration index." (col. 11, lines 37-43).

"The VIEWER also facilitates on-line licensing of DOCUMENT packaged works. Based on registration information encapsulated with the data, i.e. the Document ID, the VIEWER contacts the document's registration server and initiates an authorization transaction." (col. 20, lines 51-55).

The Examiner notes that Erickson discloses a total of six distinct data fields (as recited in the instant claims). The Examiner further notes that the only difference between the data structure of the instant claims and the data structure of Erickson lies in non-functionally descriptive material contained within their respective data fields. As such, the content of the non-functionally descriptive material will not distinguish the claimed medium/data structure from the prior art medium/data structure, and, accordingly, one of ordinary skill in the art would have recognized that any modification of such non-functionally descriptive material from that already disclosed in the prior art would not have moved to have distinguished the claimed medium/data structure as a non-obvious variant of the prior art medium/data structure. In re Ngai, 367 F.3d 1336, 1339, 70 USPQ2d 1862, 1864 (Fed. Cir. 2004). See also In re Gulack, 703 F.2d 1381, 1385-86, 217 USPQ 401, 404 (Fed. Cir. 1983).

Response to Arguments

Applicant's arguments with respect to claims 121, 124, and 126-135 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

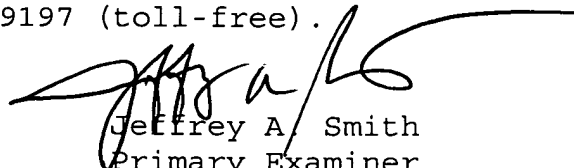
Saito et al. (U.S. Patent No. 6,665,303 B1) discloses a "data structure" comprising encrypted content, a contents key, and a license server address (see Figs. 3 and 4).

Peterson, Jr. (U.S. Patent No. 5,825,876) discloses a "data structure" comprising a package ID (24), and secured content (28) (see Fig. 1). Authorization to use the secured content is gained by contacting an authorization center via a 1-800 number over a modem (col. 8, lines 12-17).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Smith whose telephone number is (571) 272-6763. The examiner can normally be reached on M-F 6:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert M. Pond can be reached on 571-272-6760. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeffrey A. Smith
Primary Examiner
Art Unit 3625

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